
Thesis Summary

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The percentage of freight traffic as a result of the overall economic growth has increased steadily in recent decades. Especially when a freight transport in urban areas of road transport offers a faster and more flexible alternative to other modes of transport, a steady increase of transport services can be expected. The growing economic trade, partly due to an increasing service sector, as well as to the rising demand for goods, may lead to adverse effects in form of noise and fine dust emissions especially in densely built-up areas with an inadequate infrastructure. Especially the reduction of the intra-urban particulate air pollution, which has been increasing invariably, often forces cities to introduce a low emission zone, with apparently little regard to companies.

For this reason, the impact of establishing a low emission zone from the perspective of companies operating in the road freight transport will be examined in this work. For this purpose emerging problem areas will be depicted differentiated and thesis-like presented according to industry affiliation and company size. Besides that, this study will take a closer look at the impact of assimilated fleets, customer relations, as well as the attractiveness of location. It is assumed, that mostly smaller businesses, crafts enterprises in particular, do not own vehicles that are appropriate for a low emission zone entrance. Furthermore, smaller businesses are often not capable of modernizing or replacing their vehicles for new ones due to financial reasons. Moreover, it can be concluded that in the course of introducing an environmental zone companies, regardless their size and industry affiliation, see their current location as less attractive and therefore complain about a decline in customers. As a result, some companies are fully aware of the fact that they might dismiss employees or introduce short-time work.

A closer look at the automotive industry suggests that especially in garages increases in sales as a result of a rising number of orders are expected in the course of vehicle modernization concerning companies as well as individuals. Equally, it is presumed that garages and car dealers see their current location in a promising future.

Also for freight forwarding and logistics companies, the thesis-like survey shows that a large part of companies expect a rather attractive site of location which additionally results in deteriorated customer relationships.

To counteract these impaired relationships, companies must increasingly respond to individual customer requirements. Hence, this would mean a new conception of the vehicles and their routes as a result of required flexibility and just-in-time transport.

With the help of a study, carried out by the chamber of industry and commerce of Darmstadt Rhein Main, the problems mentioned and those to be expected will be examined and analyzed. For this purpose, 2900 companies of different sizes and branches within the area of Darmstadt were surveyed about the impact a possible low emission zone in Darmstadt would have on them. The empirically obtained data of 352 responding companies will demonstrate that the adoption of the fleet modernization can also be transferred to large corporations. However, the majority of the cars of all different company sizes have been sufficiently modern enough for an entrance into a low emission zone. A clear result is noticeable concerning the attractiveness of location. According to this analysis not only freight forwarding and logistics companies, crafts and service enterprises but also guest houses and even the automotive industry expect that their location will be less promising in the future. Because even the automotive industry expects a deteriorating location after analyzing the data, the study will provide a corresponding trend for the sales figures to be expected. Therefore, contrary to the determined theses, the majority of these companies expect falling sales figures and a declining number of customers. Also freight forwarding and logistics companies expect a deterioration in customer relationships, as well as a declining attractiveness of location. In addition, there is a strong need to modernise their fleet.

The more specific consideration of the individual consequences for enterprises, regardless their size and industrial affiliation, but also differentiated by those two aspects, shows that on the one hand the introduction of low emission zones attempts to reduce the pollutant emissions in these areas, on the other hand this is often implemented without regard to companies. The example of introducing a low emission zone in Darmstadt shows that in addition to the obvious impact on the fleet, many other problem areas arise, which must be counteracted with effective solutions. Moreover this work proves that the companies can only respond to a certain extent promptly and effectively to introducing a low emission zone. For this reason, it is the cities themselves, that must unburden and strengthen the enterprises and at the same time ensure an improvement of air quality.